

### **REMARKS**

Applicants respectfully request reconsideration of this Patent Application, particularly in view of the above Amendment and the following remarks. No fee is required for this Amendment as the number of independent claims is not more than three, and the total number of claims is not more than twenty.

#### **Amendment to the Claims**

Applicants have canceled Claims 1-19 and 22, without prejudice.

Applicants have amended Claim 20 to recite a coating liquor of at least 20% solids, and an add-on level of at least about 10%. Support for this Amendment can be found in the Examples of the Specification, such as Example 1, and at page 20, third paragraph.

Dependent Claim 23 has been amended to depend from Claim 20 instead of canceled Claim 1.

Applicants have added new Claims 24-36. Support for these claims can be found in the original claims, and throughout Applicants' Specification, particularly at page 19, last paragraph, through page 20, last full paragraph.

No new matter has been added to the claims by this Amendment.

#### **Claim Rejections - 35 U.S.C. §103**

##### **Hiltzik et al.**

The rejection of Claims 1-4, 6, 8-11, 13, 17, 18, 20, 21, and 23 under 35 U.S.C. §103(a) as being unpatentable over Hiltzik et al., U.S. Patent Application Publication 2003/0082382, is respectfully traversed. Claims 1-4, 6, 8-11, 13, 17, and 18 have been canceled.

Applicants amended independent Claim 20 to recite combining a masking agent and a binding agent to form a coating liquor of at least 20% solids and that the coated activated carbon particles have a silicone coating material add-on level of at least about 10%. The Hiltzik et al. Publication does not teach or suggest a silicone coating liquor of at least 20% solids and a silicone coating material add-on level of at least about 10%, as in Applicants' claimed invention.

Applicants also provide the following remarks to the comments on pages 2-3 of the Office Action. The Office Action notes the discussion of 6.4 wt. % in Paragraph 57 of the Hiltzik et al. Publication. However, Paragraph 57 is discussing acrylic polymer, not a silicone material, as in Applicants' claimed invention. Also, the Office Action puts a controlling emphasis on BWC (Page 3, last paragraph), while ignoring the full teachings of the Hiltzik et al. Publication.

It is clear from the Hiltzik et al. Publication (*See* P 59) that the disclosed coated activated carbon can have little impact on BWC, but still result in, for example, a significant reduction of ORVR (Onboard Refueling Vapor Recover). Fig. 5 illustrates clearly, that with no significant loss of BWC, the ORVR still drops significantly (11% and 24%) by reaching coating levels of only about 3.5%. This is why the Hiltzik et al. Publication teaches that coating materials other than polyethylene, such as the siloxane material in Table V, would:

have to be used at less than a coating of 3% due to their great packing disruption and certain loss of BWC, GWC and ORVR capacity.

Paragraph 60 continues to say that an amount lower than 3% of the other disclosed coating materials "may not" cause a reduction in the ORVR capacity. The Office Action is incorrect in assuming from this "negligible" impact on the BWC, that the coating does not interfere with adsorption of other compounds.

The Office Action incorrectly assumes from the BWC performance that the coated carbon of the Hiltzik et al. Publication would have a negligible impact on the Relative Adsorption Efficiency with respect to at least one odoriferous agent of at least 70%, the odoriferous agent being selected from ammonia, triethylamine, trimethylamine, dimethyldisulphide, and isovaleric acid, as recited in Applicants' claimed invention. The Office Action's assumption is directly refuted by the teachings of the Hiltzik et al. Publication, such as in the quoted passage above, and Fig. 5.

The Office Action goes to great effort trying to demonstrate that the coating in the Hiltzik et al. Publication renders Applicants' claimed invention obvious. However, all this effort is in vain, as one skilled in the art reading the Hiltzik et al. Publication would clearly understand the Hiltzik et al. Publication is teaching away from a coating weight percent of over 3% for polymers other than polyethylene.

Regarding U.S. 2003/0206848, the Hiltzik et al. Publication demonstrates that the BWC is not a "relative measure" when the carbon is coated.

Furthermore, Applicants have amended Claim 20 to recite a coating liquor solids content of at least 20%. The Hiltzik et al. Publication does not teach or suggest anywhere near such a high solids content. The solids content of an emulsion largely impacts the structure and properties of the resulting coating.

Applicants again respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a) as being unpatentable over the Hiltzik et al. Publication.

**Hiltzik et al. in view of Karapasha**

The rejection of Claims 1-4, 6, 8-11, 13, 17, 18, 20, 21, and 23 under 35 U.S.C. §103(a) as being unpatentable over Hiltzik et al., U.S. Patent Application Publication 2003/0082382, in view of Karapasha, WO 91/12030, is respectfully traversed. Claims 1-4, 6, 8-11, 13, 17, and 18 have been canceled.

The Karapasha Publication is cited for teaching particular types of mineral particles. The above comments regarding the Hiltzik et al. Publication are also applicable here and are incorporated by reference. The combination of the Karapasha Publication does not rectify the deficiencies of the Hiltzik et al. Publication discussed above. The Karapasha Publication also does not teach or suggest a silicone coating liquor of at least 20% solids and a silicone compound coating material add-on level of at least about 10%, as in Applicants' claimed invention.

For at least the above reasons, Applicants request reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a) as being unpatentable over the Hiltzik et al. Publication in view of the Karapasha Publication.

**Karapasha in view of Hiltzik et al.**

The rejection of Claims 1-4, 6-11, 13, 17, 18, 20, 21 and 23 under 35 U.S.C. §103(a) as being unpatentable over Karapasha, WO 91/12030, in view of Hiltzik et al., U.S. Patent Application Publication 2003/0082382, is respectfully traversed. Claims 1-4, 6-11, 13, 17, and 18 have been canceled.

The Hiltzik et al. Publication is combined with the Karapasha Publication in the Office Action because the Karapasha Publication does not disclose a silicone binder. However, as discussed above, the Hiltzik et al. Publication does not teach or suggest to one skilled in the art that a silicone compound-based coating

add-on level of 10% or more can or would have been expected to provide a Relative Adsorption Efficiency as high as 70%. Actually, the Hiltzik et al. Publication teaches away from a higher add-on level, by teaching that amounts higher than 3% are not desirable due to certain loss of the carbon's ORVR properties. The combination of the Hiltzik et al. Publication and the Karapasha Publication does not provide or suggest applying a silicone material-based coating to activated carbon in an amount greater than 10% while retaining a Relative Adsorption Efficiency as high as 70%, as in Applicants' claimed invention. The Karapasha Publication, alone or in combination with the Hiltzik et al. Publication, also does not teach or suggest a silicone coating liquor of at least 20% solids, as in Applicants' claimed invention.

For at least the above reasons, Applicants request reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a) as being unpatentable over the Karapasha Publication in view of the Hiltzik et al. Publication.

#### **Claim 7**

The rejection of Claim 7 under 35 U.S.C. §103(a) as being unpatentable over Hiltzik et al., U.S. Patent Application Publication 2003/0082382, or Karapasha, WO 91/12030, in view of Hiltzik et al., and further in view of Cavezzan et al., U.S. Patent 4,954,539, is respectfully traversed. Claim 7 depends from Claim 1, and is thus patentable for at least the same reasons as discussed above for Claim 1.

#### **Claim 22**

The rejection of Claim 22 under 35 U.S.C. §103(a) as being unpatentable over Hiltzik et al., U.S. Patent Application Publication 2003/0082382, Hiltzik et al. in view of Karapasha, WO 91/12030, or Karapasha in view of Hiltzik et

al., further in view of Hogenson, U.S. Patent 4,643,783, is moot as Claim 22 has been canceled.

### Conclusion

Applicants intend to be fully responsive to the outstanding Office Action. If the Examiner detects any issue which the Examiner believes Applicants have not resolved in this response, Applicants' undersigned attorney requests a telephone interview with the Examiner.

Applicants sincerely believe that this Patent Application is now in condition for allowance and, thus, respectfully request early allowance.

Respectfully submitted,



Mark D. Swanson  
Regis. No. 48,498

Pauley Petersen & Erickson  
2800 West Higgins Road, Suite 365  
Hoffman Estates, Illinois 60195  
(847) 490-1400 FAX (847) 490-1403